CLAIMS

I claim:

1. An amplified laser source for amplifying a laser projection comprising:

a diode laser source modulated by a pulse generator applying an alternate high and low voltages higher and lower than a threshold voltages projecting a modulated optical signal;

a first erbium doped fiber (EDF) for amplifying said modulated optical signal; and

a set of Bragg gratings for receiving said modulated optical signal from said first EDF for reflecting a grating-specific pulse-distortion-reduced optical signal.

2. The amplified laser source of claim 1 further comprising:

an EA modulator synchronized with said pulse generator for increasing an extinction ratio of said optical signals.

3. The amplified laser source of claim 2 further comprising:

a second erbium doped fiber (EDF) for receiving and amplifying said optical signal from said Electro-Absorption (EA) modulator.

4. The amplified laser source of claim 3 wherein:

said second erbium doped fiber (EDF) having a large mode area.

5. The amplified laser source of claim 3 wherein:

said second erbium doped fiber (EDF) having a length of several meters and a diameter greater than or equal to thirty-five micrometers.

6. The amplified laser source of claim 2 wherein:

said EA modulator is a semiconductor Electro-Absorption (EA) modulator.

7. An amplified laser source for amplifying a laser projection comprising:

a diode laser source modulated by a pulse generator applying an alternate high and low voltages higher and lower than a threshold voltages projecting a modulated optical signal;

a first erbium doped fiber (EDF) for amplifying said modulated optical signal;

a set of Bragg gratings for receiving said modulated optical signal from said first EDF for reflecting a grating-specific pulse-distortion-reduced optical signal;

an EA modulator synchronized with said pulse generator for increasing an extinction ratio of said optical signals; and

a second erbium doped fiber (EDF) for receiving and amplifying said optical signal from said EA modulator wherein said second erbium doped fiber (EDF) having a length of several meters and a diameter greater than or equal to thirty-five micrometers.

8. An amplified laser source for amplifying a laser projection comprising:

a set of Bragg gratings for reflecting a grating-specific pulse-distortion-reduced optical signal.

9. The amplified laser source of claim 8 further comprising:

a diode laser source modulated by a pulse generator applying an alternate high and low voltages higher and lower than a threshold voltages projecting a modulated optical signal to said Bragg gratings.

10. The amplified laser source of claim 9 further comprising:

a first erbium doped fiber (EDF) for amplifying said modulated optical signal.

11. The amplified laser source of claim 8 further comprising:

an EA modulator synchronized with said pulse generator for increasing an extinction ratio of said optical signals.

12. The amplified laser source of claim 11 further comprising:

a second erbium doped fiber (EDF) for receiving and amplifying said optical signal from said EA modulator.

13. The amplified laser source of claim 12 wherein:

said second erbium doped fiber (EDF) having a large mode area.

14. The amplified laser source of claim 12 wherein:

said second erbium doped fiber (EDF) having a length of several meters and a diameter greater than or equal to thirty-five micrometers.

15. The amplified laser source of claim 11 wherein:

said EA modulator is a semiconductor EA modulator.

16. A method for configuring an amplified laser source for amplifying a laser projection comprising:

employing a set of Bragg gratings for reflecting a grating-specific pulse-distortion-reduced optical signal.

17. The method of claim 16 further comprising:

modulating a diode laser source by a pulse generator applying an alternate high and low voltages higher and lower than a threshold voltages for projecting a modulated optical signal to said Bragg gratings.

18. The method of claim 17 further comprising:

amplifying an optical signal from said diode laser by a first erbium doped fiber (EDF).

19. The method of claim 17 further comprising:

transmitting said optical signals via an EA modulator synchronized with said pulse generator.

20. The method of claim 18 further comprising:

implementing a second erbium doped fiber (EDF) for receiving and amplifying said optical signal from said EA modulator.

21. The method of claim 20 wherein:

said step implementing a second EDF is a step of implementing said second erbium doped fiber (EDF) having a large mode area.

22. The method of claim 20 wherein:

said step implementing a second EDF is a step of implementing said second erbium doped fiber (EDF) having a length of several meters and a diameter greater than or equal to thirty-five micrometers.

23. The method of claim 19 wherein:

transmitting said optical signals via an EA modulator is a step of transmitting said optical signals via a semiconductor EA modulator.